TREVIGEN® Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

Cultrex® Poly-D-Lysine

Catalog #: 3439-100-01 **Size:** 100 mL
3439-200-01 2 x 100 mL

Description: Normal tissue culture-treated (TCT) plastic exhibits a net negative charge which is the result of physical and/or chemical modifications. Due to variations in plasma membrane composition, this surface is not optimal for cell adhesion. Poly-D-Lysine (fig. 1) is a highly charged, synthetic amino acid chain that may be applied onto normal TCT plastic or glass surfaces, providing a positively charged coating for enhanced cell adhesion. Moreover, poly-D-Lysine is resistant to enzymatic degradation [1], promotes the growth and differentiation of a variety of neuronal cell lines [2] and can help mouse embryonic stem cells proliferate in the undifferentiated state [3]. Trevigen's poly-D-Lysine solution is provided ready to use at 0.01% and contains polymers in the 70,000 - 150,000 kDa range.

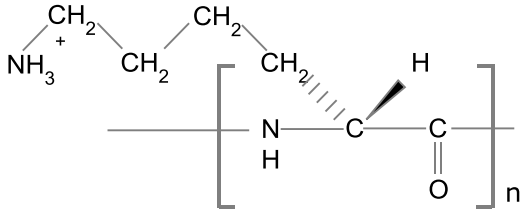

Figure 1: Poly-D-lysine

Concentration: 0.01% in phosphate-buffered saline (PBS), sterile-filtered.

Storage Conditions: Product is stable for at least 6 months from the date of receipt when stored at 2 – 8 ºC. Keep sterile.

Applications: Substrate for cell culture adhesion. An area of 25 cm^2 can be coated with 0.5 mL of a 0.1 mg/mL Poly-D-Lysine solution. Optimal conditions for attachment must be determined for each cell line and application. Slides may be dipped in the solution and air dried before applying sample. Keep sterile.

Specifications:*

- Functional Assay: Tested for ability to promote attachment of rat PC-12 pheochromocytoma cells.
- Sterility Testing: No bacterial or fungal growth detected after incubation at 37 ºC for 14 days following USP XXIV Chapter 71 sterility testing.
- Endotoxin concentration ≤ 20 EU/mL by LAL assay.

***** Mycoplasma testing: not required for synthetic product.

 E5/13/09v1

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Coating Procedure:
The recommended working concentration is 0.1 mg/mL (as provided) but may need optimization depending on cell type.

A. The following table is a guide for the suggested volumes required per well:

Plate Type	Volume Poly-D-Lysine/Well
6 wells (or 35 mm dish)	1 mL
24 wells	200 µL
48 wells	50 µL
96 wells	20 µL

B. Pipette the appropriate amount of Poly-D-Lysine solution in each well. Swirl the plate to ensure coverage. Remove excess reagent and dry wells for 2 hours at room temperature in the biological hood to ensure sterility. **OR**
Pipette the appropriate amount of Poly-D-Lysine solution in each well. Incubate the plate for 1 - 2 hours at 37° C. Remove excess reagent.

C. Rinse the wells twice with cold sterile water, PBS, or cell culture medium. Add cells.

References:

1. Tsuyuki E, Tsuyuki H, Stahmann MA. (1956) The synthesis and enzymatic hydrolysis of poly-D-lysine. *J Biol Chem.* 222:479-85.
2. Tombran-Tink J, Johnson LV. (1989) Neuronal differentiation of retinoblastoma cells induced by medium conditioned by human RPE cells. *Invest Ophthalmol Vis Sci*. **30**:1700-7.
3. Hayashi Y, Furue MK, Okamoto T, Ohnuma K, Myoishi Y, Fukuhara Y, Abe T, Sato JD, Hata R, Asashima M. (2007) Integrins Regulate Mouse Embryonic Stem Cell Self-Renewal. *Stem Cells* **25**:3005-15.

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